

**REMARKS****Claim Disposition**

Claims 1, 2, 9 - 18, 21 - 24, 31 - 40, 43 - 46, 53 - 62, 65 - 68, 75 - 84, and 87 - 88 are pending in the application. Claims 1, 2, 9, 10, 12, 15, 16, 23, 24, 32, 34, 38, 45, 46, 54, 56, 60, 67, 68, 78, 81, and 82 have been amended. Claims 3 - 8, 19, 20, 25 - 30, 41, 42, 47 - 52, 63, 64, 69 - 74, 85, and 86 have been cancelled.

**Claim Rejections -35 USC §112**

Claims 23 - 44 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to enable. Claim 23 has been amended to no longer recite the language cited by the Examiner, i.e., "a blank that machines a coordinate system into an actual part". Applicants submit that claims 23 - 44, as amended, now fully comply with 35 U.S.C. §112, first paragraph, whereby reconsideration and allowance thereof are respectfully requested.

Claims 1, 23, 45, and 67, stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to enable. The Examiner states that the virtual being substantially independent of the coordinate system is not discussed in the application. Claims 1, 23, 45, and 67 as amended no longer recite this limitation. These claims as amended recite "creating a master product and process concurrent model having both process model and a product model characteristics, said master product and process concurrent model including a virtual blank, said master product and process concurrent model lacking an associative relationship with a coordinate system, said virtual blank". Support for the lack of an associative relationship with a coordinate system is found generally at pages 19 and 42 and elsewhere in the specification. In view of the foregoing, applicants respectfully submit that claims 1, 23, 45, and 67, as amended, fully comply with 35 U.S.C. §112, first paragraph. Therefore, reconsideration and allowance of these claims are requested.

Claims 1 - 88 stand rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite. In claims 9, 10, and 32 antecedent basis for "said master product and process model" is now found in the claims. Claims 19, 41, 63, and 85 have been cancelled. Claim 73 has been cancelled. In claims 1, 23, 45, and 67 the term substantially is no longer found. Accordingly, reconsideration and allowance of claims 1, 2, 9 - 18, 21 - 24, 31 - 40, 43 - 46, 53 - 62, 65 - 68, 75 - 84, and 87 - 88 are respectfully requested.

**Claim Rejections -35 USC §101**

Claims 67 – 88 stand rejected under 35 U.S.C. §101 as allegedly not being directed to statutory subject matter. Claim 67 has been amended to recite that the signal is tangibly embodied in a medium. More specifically, claim 122 recites “[a] computer data signal propagated over a transmission medium for communicating with a computer, said signal including code configured to cause a computer to implement a method for horizontally structured CAD/CAM manufacturing modeling for concurrent product and process design”. Accordingly, reconsideration and allowance of claims 67 – 68, 75 – 84, and 87 – 88 are respectfully requested.

**Claim Rejections - 35 USC § 103**

Claims 1-88 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,629,065 to Gadh, hereinafter referred to as Gadh in view of U.S. Patent No. 4,928,221 to Belkhiter, hereinafter referred to as Belkhiter. The Examiner states that Gadh discloses “creating a master product and process concurrent model (Col. 10, lines 22-58) comprising: ... a virtual blank corresponding to said blank (Fig. 55A, element b1)... wherein said coordinate system is substantially independent of said base feature and said virtual blank”, “a manufacturing feature (Fig. 55A, any of elements nw or nb)”, “virtual machining of said manufacturing feature into said virtual blank (See Fig. 55A and Col. 36, lines 28-39)”, “said manufacturing feature exhibiting an associative relationship with said coordinate system ... (See Fig. 25A-25D; Col. 24, lines 6-32)”.

The independent claims 1, 23, 45, and 67 each recite (1) “creating a master product and process concurrent model having both process model and a product model characteristics, said master product and process concurrent model including a virtual blank, *said master product and process concurrent model lacking an associative relationship with a coordinate system*, said virtual blank corresponding to a said real-world blank” and (2) “virtual machining at least one manufacturing feature into said virtual blank, *each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system*”, emphasis added.

In Gadh there is simply no disclosure that a master product and process concurrent model (Col. 10, lines 22-58) is lacking an associative relationship with a coordinate system. In fact, referring to Figure 55A of Gadh cited by the Examiner the block b<sub>1</sub>

(referred to by the examiner as the virtual blank of the present claims) is clearly associated with a grid or coordinate system. Since the block b<sub>1</sub> of Gadh is included with the master product and process concurrent model of Gadh, it would also, by association, have a relationship with the coordinate system. In distinct contrast to the present invention, the ***"master product and process concurrent model [is] lacking an associative relationship with a coordinate system"***. In view of this, Gadh fails to disclose a ***"master product and process concurrent model lacking an associative relationship with a coordinate system"***, as recited by the independent claims. Further, Belkhiter also does not disclose a ***"master product and process concurrent model lacking an associative relationship with a coordinate system"*** (moreover, such was not suggested by the Examiner).

Also, the elements nw or nb (referred to by the examiner as the manufacturing features of the present claims) in Gadh are only shown to be associated with block b<sub>1</sub>. However, the present claims recite ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"***. These elements (nw or nb) are clearly not disclosed as having an associative relationship with the coordinate system shown. This is further supported by the fact that Gadh specifically teaches a modeling approach that is essentially the "vertical" modeling of the existing art, see generally col. 9, lines 5 – 32 of Gadh. In view of this, Gadh fails to disclose ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"***, as recited by the independent claims. Further, Belkhiter also does not disclose a ***"each of said at least one manufacturing feature exhibiting an associative relationship with said coordinate system"*** (moreover, such was not suggested by the Examiner).

In view of this, applicants respectfully submit that independent claims 1, 23, 45, and 67 patentably define over Gadh in view of Belkhiter.

Dependent claims 2, 9 – 18, 21, 22, 24, 31 – 40, 43, 44, 46, 53 – 62, 65, 66, 68, 75 – 84, and 87 – 88 are also patentably defined over Gadh in view of Belkhiter, as depending from what should now be allowable independent claims.

Accordingly, reconsideration and allowance of claims 1, 2, 9 - 18, 21 - 24, 31 - 40, 43 - 46, 53 - 62, 65 - 68, 75 - 84, and 87 - 88 are requested.

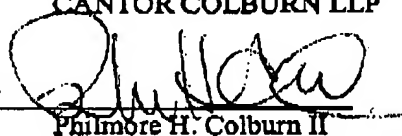
It is believed that the foregoing remarks fully comply with the Office Action.

If there are additional charges with respect to this matter or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully Submitted,

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